

WHAT IS CLAIMED IS:

1. A system for operating a plurality of power generation stations, the system comprising:

5 a general control device for monitoring a plurality of power generation stations, each of the stations including at least one electric power generation unit;

a plurality of unit control devices, each of which monitoring each of the generation units, the unit control  
10 devices producing alarm data; and

communication means for exchanging data between the general control device and each of the unit control devices;

wherein, only part of the alarm data produced in the  
15 unit control devices are displayed at the general control device.

2. A system as claimed in Claim 1, wherein:

each of the alarm data has its alarm level  
20 representing the importance of the alarm data;

the general control device includes alarm level threshold setting means for setting an alarm level threshold for display at the general control device, the alarm level threshold being decided depending upon  
25 importance of the alarm data in view of the general control device;

each of the unit control devices includes means for selecting part of the alarm data based on the alarm level and the alarm level threshold; and

the selected part of the alarm data are sent to the  
5 general control device via the communication means,  
where the selected part of the alarm data are displayed.

3. A system as claimed in Claim 1, wherein:

(a) each of the alarm data has its alarm level  
10 representing the importance of the alarm data;

(b) each of the unit control devices includes:  
alarm level threshold setting means for setting an  
alarm level threshold for display at the general control  
device, the alarm level threshold being decided depending  
15 upon importance of the alarm data in view of the general  
control device; and

selecting means for selecting part of the alarm data  
based on the alarm level and the alarm level threshold;  
and

20 (c) the selected part of the alarm are sent to the  
general control device via the communication means,  
where the selected part of the alarm data are displayed.

4. A system as claimed in Claim 1, wherein the  
25 general control device includes:

specifying means for specifying items out of the alarm

data not to display at the general control device;

means for selecting part of the alarm data excluding  
the alarm data of the items specified by the specifying  
means from the alarm data sent from the unit control  
5 devices via the communication means; and

means for displaying the part of the alarm data  
selected by the selecting means.

5. A system as claimed in Claim 1, wherein the  
10 general control device includes:

input means for stipulating at least one operation  
phase of the generation units to be displayed at the  
general control device;

receiving means for receiving alarm data from the  
15 unit control devices via the communication means, the  
alarm data including data indicating to operation phases  
of the generation units;

means for selecting a first part of the alarm data from  
the alarm data received by the receiving means;

20 means for selecting a second part of the alarm data  
from the first part of the alarm data based on the  
operation phases of the generation units corresponding to  
the operation phase stipulated by the input means; and

means for displaying the second part of the alarm  
25 data.

6. A general control device for monitoring a plurality of power generation stations, each of the stations including at least one electric power generation unit having a unit control device, the general control device  
5 being connected to each of the unit control devices via communication means, the general control device comprising:

means for setting an alarm level threshold for displaying only part of alarm data at the general control  
10 device, the alarm level threshold being dependent upon importance of the alarm data;

means for sending an information indicating the alarm level threshold to each of the unit control devices via the communication means;

15 means for receiving part of alarm data from the unit control devices, the part of alarm data being selected in the unit control devices from the alarm data produced in the unit control devices based upon the alarm level and the alarm level threshold; and

20 means for displaying the part of alarm data at the general control device.

7. A general control device for monitoring a plurality of power generation stations, each of the stations  
25 including at least one electric power generation unit having a unit control device, the general control device

being connected to each of the unit control devices via communication means, the general control device comprising:

input means for stipulating at least one operation  
5 phase of the generation units to be displayed at the general control device;

receiving means for receiving alarm data from the unit control devices via the communication means, the alarm data indicating data related to the operation phases  
10 of the generation units;

means for selecting first part of the alarm data from the alarm data received by the receiving means;

means for selecting second part of the alarm data from the first part of the alarm data based on the operation  
15 phases of the generation units corresponding to the operation phase stipulated by the input means; and

means for displaying the second part of the alarm data.

20 8. A unit control device for monitoring a power generation unit, the unit control device being connected with a general control device via communication means, the general control device monitoring a plurality of power generation stations, each of the stations including at least  
25 one electric power generation unit, the unit control device comprising:

means for setting an alarm level threshold for display at the general control device, the alarm level threshold being decided depending upon importance of the alarm data in view of the general control device;

5 means for selecting part of the alarm data based on the alarm level; and

means for sending the part of the alarm data to the general control device for display via the communication means.

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9. A system as claimed in Claim 1, comprising:

state data memory for storing current unit state data of the generation units, the state data being supplied from the generation units;

15 means for storing fixed data of the generation units for display at the general control device; and

display means for displaying unit icons indicating the current unit state data at the general control device, the display means utilizing the stored fixed data.

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10. A system as claimed in Claim 9, wherein the display means includes means for changing at least one out of shape, size, color and the location of the displayed current unit state data, based on specification or the  
25 current unit state data of the generation units.

11. A system as claimed in Claim 9, wherein:

(a) the plurality of the generation units comprises at least one group consisting of a plurality of power generation units; and

5 (b) the display means includes:

means for selectively displaying a group icon, indicating current state of the group, while suppressing display of the current unit state data of each generation units forming the group; and

10 means for selectively displaying the current unit state data of each generation unit forming the group when required.

12. A system as claimed in Claim 11, wherein the  
15 display means includes means for displaying the current unit state data of each generation unit forming the group when at least one of the generation units forming the group has an alarm data.

20 13. A system as claimed in Claim 12, wherein the icons indicating the generation units which have the alarm data have a common feature different from the feature of the icons indicating the generation units which does not have an alarm data.

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14. A system for operating a plurality of power

generation stations, the system including a general control device for monitoring a plurality of power generation units, the device comprising;

5 means for storing current unit state data of the generation units, the state data being supplied from the generation units;

means for storing fixed data of the generation units for display at the general control device; and

10 display means for displaying the current unit state data including unit icons indicating the generation units at the general control device, the display means utilizing the store fixed data.

15 15. A system as claimed in Claim 14, wherein the display means includes means for changing at least one out of shape, size, color and the location of the displayed current unit state data, based on specification or the current unit state data of the generation units.

20 16. A system as claimed in Claim 14, wherein:

(a) the plurality of the generation units comprises at least one group consisting of a plurality of power generation units; and

25 (b) the display means includes:  
means for selectively displaying a group icon, indicating current state of the group, while suppressing



display of the current unit state data of each generation units forming the group; and

means for selectively displaying the current unit state data of each generation units forming the group  
5 when required.

17. A system as claimed in Claim 16, wherein the display means includes means for displaying current unit state data of each generation unit forming the group when  
10 at least one of the generation units forming the group has an alarm data.

18. A system as claimed in Claim 16, wherein the icons indicating the generation units which have the  
15 alarm data have a common feature different from the feature of the icons indicating the generation units which does not have an alarm data.

19. A method for operating a plurality of power  
20 generation units at a single general control device, the method comprising steps of:

collecting alarm data at the power generation units;  
sending at least part of the collected alarm data to the general control device via communication means;  
25 selecting important part of the collected alarm data;  
and

displaying the selected part of the collected alarm data at the general control device.

20. A method as claimed in Claim 19, comprising steps  
5 of:

storing current unit state data of the generation units;

storing fixed data of the generation units for display at the general control device; and

10 displaying unit icons so that the unit icons indicating the current unit state data of the generation units at the general control device, utilizing the stored fixed data of the generation units.